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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.								
10/587,464	07/25/2006	Masanori Ogawa	2710/76663	9860								
7590 Donald S Dowden Cooper & Dunham 1185 Avenue of the Americas New York, NY 10036		09/06/2007	<table border="1"><tr><td colspan="2">EXAMINER</td></tr><tr><td colspan="2">FREEMAN, JOHN D</td></tr><tr><td>ART UNIT</td><td>PAPER NUMBER</td></tr><tr><td>1709</td><td></td></tr></table>		EXAMINER		FREEMAN, JOHN D		ART UNIT	PAPER NUMBER	1709	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/587,464	Applicant(s) OGAWA ET AL.	
	Examiner John Freeman	Art Unit 1709	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 2 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: TWO- OR THREE- LAYERED HEAT RESISTANT SHEET OF PHENOLIC AND THERMOPLASTIC RESINS.

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The abstract of the disclosure is objected to because it contains two paragraphs and uses inappropriate phraseology. Correction is required. See MPEP § 608.01(b).
4. The examiner suggests that Applicant removes the first sentence of the first paragraph and further uses of the phrase "present invention," and then combine the two paragraphs.

Double Patenting

5. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the

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unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1 and 2 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 18 and 19 of copending Application No. 10/570366. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following reasons.

7. Claim 1 is directed toward a two- or three-layered heat resistant sheet wherein one of the layers is made of a thermoplastic resin while the other one or two layers are made of a phenolic resin. If there are two phenolic layers, they are located on opposing sides of the thermoplastic layer. Claim 2 is directed toward the product of claim 1 by a process of creating a water solution of said phenolic resin and then (i) depositing said solution onto said thermoplastic layer, and (ii) heating the sheet.

8. Claim 18 of Application 10/570366 is for a laminated, two- or three-layered sheet wherein one sheet is an intermediating porous thermoplastic resin film between fire

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resistant fiber sheets (or simply adjacent to said fiber sheet if there is only one). Claim 18 is dependent on claims that provide for hollow fibers (claim 2), and unexpanded, expandable graphite in the fiber of the fire resistant fiber sheet (1). Claim 19 is similar in that it is also for a laminated, two- or three-layered sheet wherein one sheet is an intermediating porous thermoplastic resin film between fire resistant fiber sheets (or simply adjacent to such a fiber sheet if there is only one). However, claim 19 is dependent on claims that provide for fibers having a given maximum melting point (3), and unexpanded, expandable graphite in the fiber of the fire resistant fiber sheet (1).

9. Applicant, in other claims of Application 10/570366, further limits the fire resistant fiber sheet as one having fibers bound by a synthetic resin (claim 4), fiber impregnated by a water solution of said synthetic resin (5), and said synthetic resin as a sulfomethylated and/or sulfimethylated phenol group resin (7). Thus, the examiner concludes that a reasonable interpretation of the fire resistant fiber sheet of claims 18 and 19 is such a sheet being composed of fibers with the given limitations, bound by a phenolic resin, and wherein the fibers were bound by an aqueous solution of the phenolic resin.

10. The examiner interprets the thermoplastic layer of claims 1 and 2 of Application 10/587464 to broadly include a porous thermoplastic film. The examiner also interprets the phenolic resin layer of claims 1 and 2 to include a sulfomethylated and/or sulfimethylated phenolic resin layer that may be impregnated with fibers.

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11. Meanwhile, although the preambles of the claims of both applications are not limiting, a fire resistant sheet (claims 18 and 19 of 10/570366) should inherently have some degree of heat resistance (claims 1 and 2) to fulfill its intended use.
12. Therefore, the scopes of the claims of the applications overlap.
13. This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Atake (U.S. 5,759,684).
16. Claim 1 is directed toward a two- or three-layered heat resistant sheet wherein one of the layers is made of a thermoplastic resin while the other one or two layers are made of a phenolic resin. If there are two phenolic layers, they are located on opposing sides of the thermoplastic layer. Claim 2 is directed toward the product of claim 1 by a process of creating a water solution of said phenolic resin and then (i) depositing said solution onto said thermoplastic layer, and (ii) heating the sheet.
17. Atake discloses an intermediate product comprising a thermoplastic substrate film overlaid with a thermosetting resin (col. 6 ln. 7-10). To overlay the substrate, the

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thermosetting resin is dispersed in water to create an emulsion and then applied (col. 6 ln. 7-10). The water is removed by drying the layer (col. 7 ln. 8-13). The thermosetting resin can be a phenolic resin (col. 6 ln. 25-27).

Claim Rejections - 35 USC § 112

18. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

19. The term "heat resistant" in claims 1 and 2 is a relative term which renders the claim indefinite. The term "heat resistant" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. "Heat resistant" gives no connotation of how much heat a material must be able to withstand before Applicant considers it to be heat resistant. Furthermore, the manner in which a material can react to heat is ambiguous, e.g. if a material becomes charred upon heating, but otherwise maintains its integrity, it is unclear whether Applicant would consider this to be heat resistant.

Conclusion

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Heikkila et al. (6,007,656), Nishiyama et al. (5,151,327) and Shiokawa et al. (2002/0097316) disclose the use of phenolic resins as heat resistant layers. Fukuda et al. (4,883,379) and Kosaka et al. (6,207,268) both disclose the use of phenolic resins as heat resistant layers in multilayer articles. Sogabe et al. (6,080,479) disclose a heat resistant phenol layer and the use of an aqueous dispersion to create said layer. Also, Heikkila et al. (6,007,656), Nishiyama et al. (5,151,327) and Sakurai et al. (4,618,240) teach the use of fiber-impregnated phenolic resins as heat resistant layers.

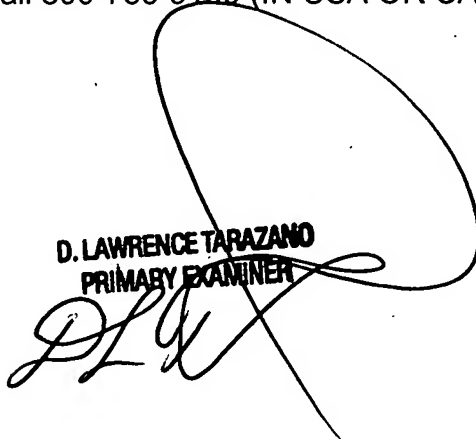
Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Freeman whose telephone number is 571-270-3469. The examiner can normally be reached on Monday-Friday 7:30-5:00PM EST (First Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, D. Lawrence Tarazano can be reached on 571-272-1515. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

D. LAWRENCE TARAZANO
PRIMARY EXAMINER

A large, stylized handwritten signature in black ink, appearing to read 'DLT', is written over the printed name and title of the examiner.

John Freeman
Examiner
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